

SPONTANEOUS FETAL DEATHS

INTRODUCTION

A *fetal death* is the death of a human fetus that occurs prior to its expulsion or extraction from its mother, irrespective of the duration of pregnancy. In Louisiana a *spontaneous fetal death* (also referred to as stillbirth) is a fetal death that meets these criteria:

- 1. the fetus survived at least 20 weeks gestation or weighed at least 350 grams, and
- the death was not the result of an induced termination of pregnancy.

Purpose of Spontaneous Fetal Death Surveillance

As with infant mortality, a high rate of fetal deaths reflects unfavorable environmental influences and/or the unavailability of medical care. Compared with infant mortality, however, the factors contributing to fetal deaths have been studied less, therefore limiting the understanding of their etiology. Consequently, fewer prevention efforts have been initiated to reduce the rate of fetal deaths. Overall, the depth and quality found in fetal death data is poorer than that of live birth data.

Fetal death surveillance is important in the evaluation of adverse reproductive outcomes and in the identification of factors that result in fetal deaths. The goal of fetal death surveillance is the identification of high-risk populations and the development of risk-reducing interventions.

Source of Data: Certificate of Fetal Death (Stillbirth)

Spontaneous fetal death information presented in this report is gathered from data recorded on the *Certificate of Fetal Death* for spontaneous fetal deaths that occurred to infants born to Louisiana residents during 2000. The 1992 Revision of the Model State Vital Statistics Act and Regulations indicates that fetal deaths of at least 20 weeks gestation or 350 grams should be reported to the Vital Records Registry within 5 days of delivery, or as otherwise directed by the State Registrar. A physician or coroner in consultation with the parent(s) completes information on the fetal death certificate. ¹

Death statistics are compiled in accordance with World Health Organization (WHO) regulations, which require member nations to classify causes of death according to the current revision of the International Statistical Classification of Disease, Injuries, and Causes of Death. Fetal deaths that occurred in 2000 are coded in accordance with the tenth revision (ICD-10).

All of the causes of death described in this report are *underlying causes of death*, defined as the disease or injury that initiated the sequence of events leading to death. Secondary causes of death, which are also recorded on the death certificate, are not presented in this report.

The degree of registration completeness for spontaneous fetal deaths is unknown, but some under-registration is likely, especially for fetal deaths near 20 weeks gestation or under 500 grams weight at delivery. However, reporting is believed to be relatively complete and more reliable for fetal deaths at a gestation of 28 weeks or more.

FETAL DEATHS: Introduction

FETAL DEATH COUNTS AND RATES

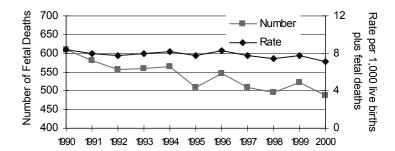
In 2000, 522 fetal deaths were reported to the Vital Records Registry, with 487 of these deaths meeting Louisiana's definition² of a spontaneous fetal death (i.e., the fetus survived at least 20 weeks gestation or weighed at least 350 grams).

The 35 fetal deaths that failed to meet these criteria have been excluded from this analysis. They are included, however, in *Table F10* (Causes of Fetal Deaths) and in the parish and region tables (found on the diskettes which accompany this publication).

Louisiana's 2000 fetal mortality rate was 7.1 fetal deaths per 1,000 live births plus fetal deaths. This rate was lower than the 1999 rate of 7.7 per 1,000 live births plus fetal deaths (*Figure F1, Table F1*).

Gestational ages reported for
Louisiana fetal deaths occurring in
1995 or later are derived by using
the National Center for Health
Statistics' formula for the calculation
of gestational age. This formula
calculates gestational age by
combining information collected in
the "Date Last Normal Menses
Began" and "Clinical Estimate of
Gestation" sections of the Louisiana
Certificate of Fetal Death (Stillbirth).
It also takes into account the fetal
birthweight relative to gestational
age. Prior to 1995, "Clinical

Figure 1. Number and Rates of Fetal Deaths Louisiana, 1990-2000



Fetal Death Defined as gestational age >=20 weeks or birthweight >= 350 grams

Table F1.
Number and Rates of Fetal Deaths
Louisiana, 1990-2000

Year	Number	Rate⁺	_
1990	611	8.4	_
1991	581	8.0	
1992	556	7.8	
1993	560	8.0	
1994	564	8.2	
1995	510	7.7	
1996	547	8.3	
1997	509	7.7	
1998	495	7.4	
1999	521	7.7	
2000	487	7.1	

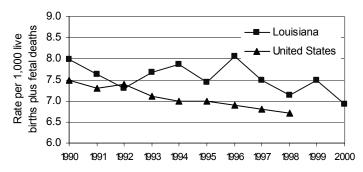
*Rate per 1,000 live births plus fetal deaths. Fetal death defined as gestational age >= 20 weeks or birthweight >=350 grams)

Estimate of Gestation" was not recorded on Louisiana's Fetal Death Certificates. Therefore, gestational ages reported for the years prior to 1995 are calculated by subtracting the "Date Last Normal Menses Began" from the "Date of Delivery", as recorded on the Fetal Death Certificates. The National Center for Health Statistics (NCHS), which reports national fetal death information, uses only gestational age at least 20 weeks, in its definition of fetal death. To facilitate

comparison between Louisiana and the United States, fetal death data based on the NCHS definition are used in all Louisiana and United States data presentations.

Fetal mortality rates for Louisiana and United States have been similar the last ten years. Both rates have declined over this period of time (Figure F2, Table F2).

Figure F2. Fetal Mortality Rates Louisiana and United States, 1990-2000



Fetal death defined as gestational age >=20 weeks

Table F2. Fetal Mortality Rates⁺ Louisiana and United States, 1990-2000

Year	Louisiana	United States
1990	8.0	7.5
1991	7.6	7.3
1992	7.3	7.4
1993	7.7	7.1
1994	7.9	7.0
1995	7.4	7.0
1996	8.0	6.9
1997	7.5	6.8
1998	7.1	6.7
1999	7.5	Not Available
2000	6.9	Not Available

⁺Rate per 1,000 live births plus fetal deaths. Fetal death defined as gestational age >= 20 weeks. Note: Louisiana rates in this table will differ from F3, given that fetal death is defined by the national standard not Louisiana's standard.

Source: Louisiana State Center for Health Statistics, National Center for Health Statistics

MATERNAL PROFILE

Race and Age

As with the overall fetal mortality rate, rates of fetal deaths by race in Louisiana have changed little over the past decade. Rates among

blacks have been consistently higher than for whites over the past decade (Figure F3, Table F3). Fetal mortality rates for blacks in Louisiana have been lower than corresponding national rates during the past decade. Rates for whites in Louisiana during the past ten years

have mirrored closely the corresponding national rates. Because of differences between state and national distributions of race, Louisiana's total rates have been slightly higher than national total rates during the past decade (Figure F4 and Table F4).

Table F3. Fetal Mortality Rates⁺ by Maternal Race Louisiana, 1990-2000

Year	All Rac	es ⁺⁺⁺	Whi	te	Black		
rear	Number	Rate	Number	Rate	Number	Rate	
1990	611	8.4	286	6.9	316	10.5	
1991	581	8.0	211	5.2	369	12.0	
1992	556	7.8	247	6.2	304	10.1	
1993	560	8.0	228	5.9	326	10.9	
1994	564	8.2	223	5.9	336	11.6	
1995	510	7.7	215	5.7	286	10.6	
1996	547	8.3	236	6.3	300	11.2	
1997	509	7.7	220	5.8	276	10.1	
1998	495	7.4	203	5.3	269	9.7	
1999	521	7.7	215	5.6	288	10.5	
2000	487	7.1	217	5.7	263	9.2	

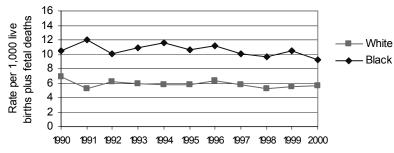
^{*}Rate per 1,000 live births plus fetal deaths in race group. Fetal death defined as gestational age >=20 weeks or birthweight >=350 grams

++ "All Races" Includes white, black, other and unknown

Of the 487 fetal deaths in 2000, 217 (44.6%) were to white women and 263 (54.0%) were to black women. Black women were more likely than white women to experience a fetal death, at a rate of 9.2 compared with 5.7 fetal deaths per 1,000 live births plus fetal deaths in racespecific groups (*Table F3*). This racial disparity was consistent within all age groups.

Women aged 35 and older reported the highest fetal mortality rate compared with other age groups, at a rate of 10.4 fetal deaths

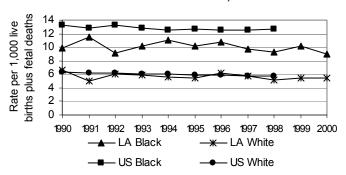
Figure F3. Fetal Mortality Rates by Maternal Race Louisiana, 1990-2000



Fetal deaths defined as gestational age>=20 weeks or birthweight >=350 grams

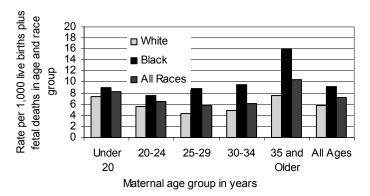
per 1,000 live births plus fetal deaths. Black mothers 35 years and older had the highest fetal mortality rates at 16.0 fetal deaths per 1,000 live births plus fetal deaths (*Figure F5, Table F5*).

Figure F4. Fetal Mortality Rates by Maternal Race Louisiana and United States, 1990-2000



Fetal death defined as gestational age >=20 weeks and birthweight >=350 grams

Figure F5. Fetal Mortality Rates by Maternal Race and Age, Louisiana, 2000



Fetal death defined as gestational age >=20 weeks and birthweight >=350 grams

Table F4.
Fetal Mortality Rates by Maternal Race
Louisiana and United States, 1990-2000

	Louis	siana		United	d States		
Year	All Races +++	White	Black	All Races +++	White	Black	
1990	8.0	6.7	9.8	7.5	6.4	13.3	
1991	7.6	4.9	11.5	7.3	6.2	12.8	
1992	7.3	6.0	9.2	7.4	6.2	13.3	
1993	7.7	5.8	10.2	7.1	6.1	12.8	
1994	7.9	5.6	11.0	7.0	6.0	12.5	
1995	7.4	5.5	10.2	7.0	5.9	12.7	
1996	8.0	6.2	10.8	6.9	5.9	12.5	
1997	7.5	5.8	9.8	6.8	5.8	12.5	
1998	7.1	5.2	9.4	6.7 5.7		12.3	
1999	7.5	5.4	10.2	Not Available			
2000	6.9	5.5	9.0	Not A	vailable		

^{*}Rate per 1,000 live births plus fetal deaths. Fetal death defined as gestational age >=20 weeks.

Note: Louisiana rates in this table will differ from F3, given that fetal death is defined by national not Louisiana standards.

Table F5. Fetal Mortality Counts and Rates⁺ by Maternal Race and Age Louisiana, 2000

	Unde	r 20	20-24		25-29		30-34		35 & Older		All Ages	
Race	Num.	Rate	Num.	Rate	Num.	Rate	Num.	Rate	Num.	Rate	Num.	Rate
All Races+++	97	8.3	142	6.5	98	5.8	72	6.1	63	10.4	487	7.1
White	34	7.3	60	5.6	46	4.3	40	4.9	30	7.6	217	5.7
Black	62	9.1	82	7.6	51	8.8	3134	9.5	30	16.0	263	9.2

^{*}Rate per 1,000 live births plus fetal deaths. Fetal death defined as gestational age >=20 weeks or birthweight >=350 grams.

^{*** &}quot;All Races" includes white, black, other, and unknown

^{+++*,} All Races" includes white, black, other, and unknown.

[&]quot;All Ages" contains age unknown.

Prenatal Care

Prenatal care is recognized as an important means of providing medical, nutritional, and educational interventions to reduce the risk of adverse pregnancy outcomes and to identify women at high risk for these outcomes. Assessing the role of prenatal care in fetal mortality. however, is complicated by differences among women in areas such as health and behavior, trimester of entry into prenatal care, and opportunity to obtain prenatal care because of shortened length of pregnancy. Also, fetal death certificates include limited information on prenatal care and do not assess the quality of care.

Women who received no prenatal care during pregnancy were almost six times more likely to experience a fetal death than women who had at least one prenatal visit during their pregnancy. For this analysis "no prenatal care" is defined as reporting no prenatal visits during the pregnancy. "Any prenatal care" refers to live births for which the mother had at least one prenatal care visit. The rate of fetal deaths among women with no prenatal care was 38.8 fetal deaths per 1,000 live births plus fetal deaths. Among women who received some type of prenatal care, the rate was 6.0 (Table F6).

Table F6. Number and Rates⁺ of Fetal Deaths by Prenatal Care Status and Race Louisiana, 2000

_	No C	are	Any (Care
Race	Number	Rate	Number	Rate
All Races***	35	38.8	400	6.0
White	13		194	5.1
Black	22	31.0	202	7.3

^{*}Rate of occurrence per 1,000 live births plus fetal deaths in specified group.

Examination of fetal deaths in the year 2000, with regard to prenatal care by race and age resulted in counts smaller than twenty. Counts less than twenty are not sufficient to calculate rates because they are sensitive to yearly fluctuations and result in unreliable rates. To increase the size of the counts used to calculate race and age-specific prenatal care rates, data for 1996 through 2000 were combined to produce five-year (1996-2000) rates. For the five-year period, fetal death rates for women with and without prenatal care during pregnancy (all races and age groups combined) were similar to those seen in 2000 alone. Among women with no prenatal care, the rate was 40.5 fetal deaths per 1,000 live births plus fetal deaths. Among women who received some type of prenatal care, the rate was 6.5 fetal deaths per 1,000 live births plus fetal deaths.

Rates calculated using 1996-2000 aggregate data showed that a higher rate of fetal deaths among women with no prenatal care was apparent in both black and white

women. White women had a higher combined fetal death rate per 1,000 live births plus fetal deaths for the five years than black women 41.9 versus 38.8.

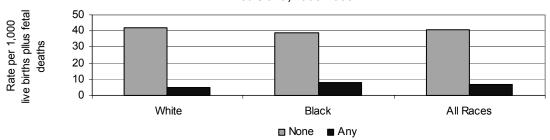
Combined rates for 1996-2000 also showed that white women who received no prenatal care were almost eight times more likely to experience a fetal death as those with prenatal care (41.9 versus 5.2 fetal deaths per 1,000 live births plus fetal deaths, respectively). During the same time period, black women who received no prenatal care were almost five times as likely as those receiving prenatal care to experience a fetal death (38.8 versus 8.3 fetal deaths per 1,000 live births plus fetal deaths, respectively).

In all maternal age groups, the fetal death rate was consistently higher among women with no prenatal care. The highest fetal death rate (48.3) was evident among black mothers under age 20 years who had no prenatal care (Figure F6, Figure F7, and Table F7).

^{+++ &}quot;All Races" includes white, black, other, and unknown

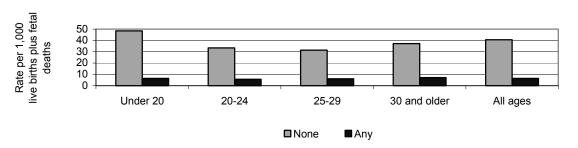
[&]quot;- -" Indicates rate is unstable due to small number (<20) of fetal deaths
Fetal Death defined as gestational age >= 20 weeks or birthweight >= 350 grams

Figure F6. Fetal Mortality Rates by Prenatal Care Status (None or Any) and Maternal Race Louisiana, 1996-2000



Fetal deaths defined as gestational age >=20 weeks or birthweight>=350 grams

Figure F7. Fetal Mortality Rates by Prenatal Care Status (None or Any) and Maternal Age Louisiana, 1996-2000



Fetal deaths defined as gestational age >=20 weeks or birthweight >=350 grams

Table F7. Number and Rates[†] of Fetal Deaths by Prenatal Care Status, Race, and Age Louisiana, 1996-2000 Combined

	Under 20 20-24 25-29 30 and older All ages Under 20 20-24 25-29 30 and older All ages Under 20 20-24 25-29 30 and older All ages Under 20 20-24 ack 25-29 30 and older	No C	are	Any (Care
Race Group Number Under 20 62 20-24 55 25-29 28 30 and older 39 All ages 198 Under 20 13 20-24 15 25-29 13 20-24 15 25-29 ***** 30 and older All ages 45 Under 20 41 ages 45 Under 20 48 20-24 38	Rate	Number	Rate		
	Under 20	62	48.4	387	6.5
	20-24	55	33.3	572	5.7
All Races ⁺⁺⁺	25-29	28	31.4	511	6.1
	30 and older	39	37.2	619	7.2
	All ages	198	40.5	2153	6.5
	Under 20	13		124	5.1
	20-24	15		210	4.1
White	25-29	****		291	5.3
	30 and older	12		351	6.0
	All ages	45	41.9	988	5.2
		48	48.3	256	7.5
	20-24	38	28.9	353	7.4
Black	25-29	25	38.4	209	7.8
	30 and older	27	35.1	250	10.0
	All ages	145	38.8	1111	8.3

^{*}Rate of occurrence per 1,000 live births plus fetal deaths in specified group. Fetal Death defined as gestational age >= 20

⁻⁻ Indicates rate is unstable due to small number (<20) of fetal deaths in numerator or denominator **** in cell means count is less than 5.

Medical Risk Factors for Complications of Pregnancy

In 1994, Louisiana began collecting information describing medical risk factors for complications of pregnancy. Because reporting of medical conditions is believed to be incomplete for fetal deaths, caution should be exercised when evaluating these data. Of the 487 fetal deaths reported in the year 2000, 206 (42.3%) reported no medical risk factors. When

mentioned, the most frequently reported medical risk factors for complications of pregnancy resulting in fetal death were; Anemia, Diabetes, incompetent cervix and pregnancy-associated hypertension, with 27, 25, 22 and 21 fetal deaths, respectively.

Hydramnios\Oligohydramnios, previous preterm or small for gestational age babies, and chronic hypertension were also prevalent risk factors for pregnancies that resulted in fetal deaths. A substantial percentage of pregnancies terminating in fetal death (20.2%) were associated with risk factors not pre-defined in the categories presented in this report (Table F8).

Table F8. Number of Fetal Deaths by Medical Risk Factors for Complications of Pregnancy and Maternal Race Louisiana, 2000

Medical Risk Factor for Complications of Pregnancy			
	All Races***	White	Black
NO MEDICAL RISK FACTOR NOTED	206	103	99
ANEMIA (HCT <30 \ HGB <10)	27	5	22
DIABETES	25	11	14
INCOMPETENT CERVIX	22	7	15
HYPERTENSION, PREGNANCY ASSOCIATED	21	7	14
PREVIOUS PRETERM OR SMALL FOR GESTATIONAL AGE	20	10	10
HYDRAMNIOS\OLIGOHYDRAMNIOS	19	8	11
HYPERTENSION, CHRONIC	17	6	11
UTERINE BLEEDING	11	5	5
GENITAL HERPES	****	****	****
CARDIAC DISEASE	****	****	****
PREVIOUS INFANT 4000+ GRAMS	****	****	****
ACUTE OR CHRONIC LUNG DISEASE	****	****	0
RENAL DISEASE	****	****	0
OTHER	97	40	47

Fetal deaths defined as gestational age >=20 weeks or birthweight >=350grams ****"All Races" includes white, black, other, and unknown

[&]quot;****" in cell means count is less than 5

Tobacco and Alcohol Use during Pregnancy

At the time of delivery, the mother reports on tobacco and alcohol use during the pregnancy. Although this information is recorded on the fetal death certificate it should be evaluated with caution because it is subject to error from inaccurate maternal recall. In addition, both tobacco and alcohol usage are categorized as either use or nonuse, a dichotomy that does not account for different levels of usage. As the examination of tobacco and alcohol use for the year 2000 resulted in small counts (less than 20), data for 1996 through 2000 were combined to produce four-year rates.

Women who reported smoking or drinking during pregnancy experienced a fetal death more often than women who did not engage in these risk behaviors. Women who smoked during pregnancy experienced fetal deaths more often than women who did not smoke, at a rate of 8.5 per 1,000 live births plus fetal deaths among reported smokers, compared to 7.0 per 1,000 live births plus fetal deaths among reported non-smokers.

Women who drank alcohol during pregnancy experienced a fetal death more than twice as often as those who did not drink, at a rate of 19.7 per 1,000 live births plus fetal

deaths among reported alcohol drinkers compared to 7.1 in women who reported they did not drink alcohol.

Women who reported both smoking and drinking alcohol during pregnancy had a fetal death rate higher than women in all other tobacco or alcohol groups, and more than three times higher than the rate seen in women who reported neither smoking nor drinking alcohol during their pregnancies. Rates were 24.7 fetal deaths per 1,000 live births plus fetal deaths among women who reported both smoking and drinking alcohol compared to 7.0 in women who reported neither smoking nor drinking alcohol during their pregnancies (Table F9).

Table F9. Number and Rates[†] of Fetal Deaths by Tobacco and Alcohol Use During Pregnancy, Louisiana, 1996-2000 Combined

	Toba	CCO	Alcoho	ol	Both		
	Number	Rate	Number	Rate	Number	Rate	
Used	290	8.5	40	19.7	34	24.7	
Did not use	2119	7.0	2362	7.1	1341	7.0	

^{*}Rate per 1,000 live births plus fetal deaths in specified group.
Fetal deaths defined as gestational age >=20 weeks or birthweight >=350 grams

CAUSE OF FETAL DEATH

Given that several factors can contribute to fetal deaths, cause-of-death analyses are important for examining preventable risks. One major limitation of using the cause-of-death data from fetal death certificates is that many fetuses that die are not autopsied or otherwise evaluated, resulting in implausible or misclassified causes of death. Evaluations of fetuses also tend to report cause of death in such a way that the fetus falls in a "catch-all" or non-specific category that prohibits in-depth analysis. For instance, one-quarter (25.0%) of the 522 fetal deaths reported in Louisiana in 2000 were classified under "Other conditions originating in the perinatal period." Nearly another quarter (24.3%) were classified under "Fetal death of unspecified cause". Fetal deaths described in this section include all fetal deaths reported to the Vital Records Registry in 2000, regardless of gestational age or birthweight.

The leading cause of fetal death was "conditions originating in the perinatal period" (697.2 fetal deaths per 100,000 live births plus fetal deaths), the most frequent of these being "fetus affected by complications of placenta, cord and membranes" (196 fetal deaths per 100,000 live births plus fetal deaths). The ratio of fetal death caused by complications of placenta, cord and membranes was higher among white women at 200.3 occurrences per 100,000 live births, versus 194.1 in blacks.

Table F10 (on the following page) summarizes all fetal deaths reported to Louisiana in 2000 by cause, maternal age, and maternal race

Table F10. Fetal Deaths by Selected Causes of Death, Maternal Age and Race Louisiana, 2000

Cause of Death								ernal Ag				
ICD010 Code	Race	Ratio+	All	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Unk.
All causes	All	769.4	522	****	97	155	105	75	53	17	****	15
	White	614.0	233	****	34	64	48	42	27	10	0 ****	7
	Black	988.2	280	****	62 ****	91	55 ****	31 ****	23	7		****
In alt	Other	576.2	****	0		0			****	0	0	
In situ neoplasms, benign neoplasms	All	1.5 2.6	****	0	0	0	0	0	****	0 0	0	0
and neoplasms of uncertain or unknown behavior (D00-D48)	White Black	0.0	0	0	0	0	0	0	0	0	0	0
dikilowii beliavioi (D00-D46)	Other	0.0	0	0	0	0	0	0	0	0	0	0
Certain conditions originating in	All	697.2	473	****	94	141	95	67	48	12	****	12
the perinatal period (P00-P96)	White	527.1	200	****	32	56	41	36	24	6	0	****
(Black	935.2	265	****	61	85	52	29	22	6	****	7
	Other	512.2	8	0	****	0	****	****	****	0	0	****
Fetus affected by maternal	All	42.7	29	0	6	8	7	6	****	****	0	0
conditions that may be unrelated to	White	10.5	****	0	****	****	0	****	0	0	0	0
present pregnancy (P00)	Black	88.2	25	0	****	7	7	5	****	****	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by maternal	All	36.8	25	0	5	6	7	5	****	****	0	0
hypertensive disorders (P00.0)	White	10.5	****	0	****	****	0	****	0	0	0	0
	Black	74.1	21	0	****	5	7	****	****	****	0	0
	Other	0.0	0 ****	0	0	0 ****	0	0	0	0	0	0
Fetus affected by maternal	All	1.5		0	0		0	0	0	0	0	0
infectious and parasitic diseases	White	0.0	0 ****	0	0	0 ****	0	0	0	0	0	0
(P00.2)	Black Other	3.5 0.0	0	0	0	0	0	0	0	0 0	0	0
Fetus affected by maternal injury	All	2.9	****	0	****	****	0	0	0	0	0	0
(P00.5)	White	0.0	0	0	0	0	0	0	0	0	0	0
(1 00.5)	Black	7.1	****	0	****	****	0	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by other medical	All	1.5	****	0	0	0	0	****	0	0	0	0
procedures and maternal conditions	White	0.0	0	0	0	0	0	0	0	0	0	0
(P00.7-P00.8)	Black	3.5	****	0	0	0	0	****	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by maternal	All	123.8	84	0	11	27	22	11	9	****	****	****
complications of pregnancy (P01)	White	68.5	26	0	****	6	6	6	****	****	0	****
	Black	201.2	57	0	8	21	15	5	6	0	****	****
	Other	64.0	****	0	0	0	****	0	0	0	0	0
Fetus affected by incompetent	All	26.5	18	0	****	7 ****	****	****	****	0	0	0
cervix (P01.0)	White	15.8	6	0	****		0 ****	****	0 ****	0	0	0
	Black Other	42.4 0.0	12 0	0	0	5 0	0	0	0	0 0	0	0
Fetus affected by premature rupture	All	76.6	52	0	6	12	18	6	7	0	****	****
of membranes (P01.1)	White	42.2	16	0	****	****	6	****	****	0	0	****
of membranes (i o i.i)	Black	123.5	35	0	5	9	11	***	5	0	****	****
	Other	64	****	0	0	0	****	0	0	0	0	0
Fetus affected by oligohydramnios	All	4.4	****	0	****	****	0	0	0	0	0	0
(P01.2)	White	0.0	0	0	0	0	0	0	0	0	0	0
,	Black	10.6	****	0	****	****	0	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by multiple	All	2.9	****	0	0	****	0	****	0	0	0	0
pregnancy (P01.5)	White	2.6	****	0	0	****	0	0	0	0	0	0
	Black	3.5	****	0	0	0	0	***	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by other and	All	13.3	9	0	****	5	****	0	****	****	0	0
unspecified maternal complications	White	7.9	****	0	****	0	0	0	****	****	0	0
of pregnancy (P01.8-P01.9)	Black	21.2	6	0	0	5	****	0	0	0	0	0
Fature offerted by an all the second	Other	0.0	0	0	0	0	0	0	0	0	0	****
Fetus affected by complications of	All	196.0	133	0	25	37	26	21	17	6 ****	0	
placenta, cord and membranes (P02)	White	200.3	76	0	11	20	17	16 ****	9 7	****	0	0
	Black	194.1 128.0	55 ****	0	14	17 0	9	****	****		0	
	Other	128.0		U	0	0	U			0	U	0

							Mat	ernal Age				
Cause of Death ICD010 Code	Race	Ratio+	All	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Unk.
Fetus affected by placenta previa	All	1.5	****	0	****	0	0	0	0	0	0	0
(P02.0)	White	0.0	0	0	0	0	0	0	0	0	0	0
	Black	3.5	****	0		0	0	0	0	0	0	0
Fature offseted by other forms of	Other	0.0 41.3	0 28	0	0 ****	9	<u>0</u>	<u>0</u>	****	0 ****	0	0
Fetus affected by other forms of placental separation and hemorrhage	All White	31.6	28 12	0	****	****	****	5	0	****	0	0
(P02.1)	Black	52.9	15	0	****	8	****	****	****	****	0	0
(1 02.1)	Other	64.0	****	0	0	0	0	0	****	0	0	0
Fetus affected by other and	All	26.5	18	0	8	****	****	****	****	****	0	0
unspecified morphological and	White	21.1	8	0	****	****	****	****	****	****	0	0
functional abnormalities of	Black	35.3	10	0	5	0	****	****	0	0	0	0
placenta (P02.2)	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by placental	All	2.9	****	0	0	0	0	0	****	0	0	0
Transfusion syndromes (P02.3)	White	5.3	****	0	0	0	0	0	****	0	0	0
	Black	0.0	0	0	0	0	0	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by prolapsed cord	All	7.4	5 ****	0	****	0	****	0	****	0	0	****
(P02.4)	White	2.6	****	0	0 ****	0	0 ****	0	****	0 0	0	0 ****
	Black	14.1 0.0	0	0 0		0		0	0	0	0	
Fetus affected by other compression	Other All	50.1	34	0	<u>0</u> 5	15	<u>0</u> 5	****	****	****	0	0
of umbilical cord (P02.5)	White	63.2	24	0	****	10	5	****	****	****	0	0
or ambilical cord (1 02.3)	Black	35.3	10	0	****	5	0	****	****	****	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	Ö
Fetus affected by other and	All	39.8	27	0	****	8	6	5	****	****	0	0
Unspecified conditions of umbilical	White	50.1	19	0	****	5	5	5	****	0	0	0
cord (P02.6)	Black	28.2	8	0	****	****	****	0	****	****	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by chorioamnionitis	All	26.5	18	0	****	****	****	****	5	0	0	0
(P02.7)	White	26.4	10	0	****	****	****	****	****	0	0	0
	Black	24.7	7 ****	0	****	****	****	0 ****	****	0	0	0
Fature affects at law attack	Other	64.0	****	0	0	<u> </u>	<u>0</u>		0	0	0	0
Fetus affected by other	All	4.4	****	0	0 0	****		0	0	0	0	0
Complications of labor and delivery (P03)	White Black	2.6 7.1	****	0	0	****	0 ****	0	0	0 0	0	0
(1 03)	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by breech delivery	All	1.5	****	0	0	0	****	0	0	0	0	
and extraction (P03.0)	White	0.0	0	0	0	0	0	0	0	0	0	Ö
and shadeden (r eere)	Black	3.5	****	0	0	0	****	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by other and	All	2.9	****	0	0	****	0	0	0	0	0	0
unspecified complications of labor	White	2.6	****	0	0	****	0	0	0	0	0	0
and delivery (P03.8-P03.9)	Black	3.5	****	0	0	****	0	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetus affected by noxious	All	1.5	****	0	0	0	0	****	0	0	0	0
influences transmitted via placenta	White	2.6	****	0	0	0	0	****	0	0	0	0
(P04)	Black	0.0	0	0	0	0	0	0	0	0	0	0
Classifatal arguith and fatal	Other All	0.0 4.4	0 ****	0	0	0	0	0	0 ****	0	0	<u>0</u>
Slow fetal growth and fetal malnutrition (P05)	White	2.6	****	0	0	0	0	0	****	0	0	0
manduluon (r 03)	Black	7.1	****	0	0	0	0	0	****	0	0	****
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Disorders related to short	All	78.1	53	****	15	16	6	8	****	0	0	****
gestation and low birth weight, not	White	44.8	17	****	6	5	****	****	0	0	0	0
elsewhere classified (P07)	Black	116.5	33	****	9	11	****	****	****	0	0	****
, ,	Other	192.1	****	0	0	0	****	****	****	0	0	0
Extremely low birth weight or	All	42.7	29	0	8	10	****	****	****	0	0	****
extreme immaturity (P07.0,P07.2)	White	21.1	8	0	****	****	0	****	0	0	0	0
	Black	70.6	20	0	****	8	****	****	****	0	0	****
	Other	64.0	****	0	0	0	0	0	****	0	0	0

Cours of Dooth							Mat	ernal Age	e			
Cause of Death ICD010 Code	Race	Ratio+	All	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Unk.
Other low birth weight and preterm	All	35.4	24	****	7	6	***	****	****	0	0	0
(P07.1,P07.3)	White	23.7	9	****	****	****	****	****	0	0	0	0
	Black	45.9	13	****	5	****	****	****	****	0	0	0
	Other	128.0	****	0	0	0	****	****	0	0	0	0
Intrauterine hypoxia and birth	All	7.4	5	0	****	****	****	****	0	0	0	0
asphyxia (P20-P21)	White	5.3	****	0	0	0	0	****	0	0	0	0
	Black	10.6	****	0	****	****	****	0	0	0	0	0
 	Other	0.0	0	0	****	0 ****	0 ****	0 ****	0	0	0	0
Intrauterine hypoxia, unspecified	All	7.4	5 ****	0				****	0	0	0	0
(P20.9)	White	5.3	****	0	0 ****	0 ****	0 ****		0	0	0	0
	Black Other	10.6 0.0	0	0	0	0	0	0	0	0 0	0	0
Other respiratory conditions	All	1.5	****	0	0	0	****	0	0	0	0	0
originating in the perinatal period	White	0.0	0	0	0	0	0	0	0	0	0	0
(P23-P28)	Black	3.5	****	0	0	0	****	0	0	0	0	0
(1 25-1 20)	Other	0.0	0	0	0	0	0	0	0	0	0	0
Atelectasis (P28.0-P28.1)	All	1.5	****	0	0	0	****	0	0	0	0	0
Atticiotasis (1 20.0-1 20.1)	White	0.0	0	0	0	0	0	0	0	0	0	0
	Black	3.5	****	0	0	0	****	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Infections specific to the	All	2.9	****	0	****	****	0	0	0	0	0	0
perinatal period (P35-P39)	White	2.6	****	0	****	0	0	0	0	0	0	0
p	Black	3.5	****	0	0	****	0	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Congenital herpes viral (herpes	All	1.5	****	0	****	0	0	0	0	0	0	0
simplex) infection (P35.2)	White	2.6	****	0	****	0	0	0	0	0	0	0
	Black	0.0	0	0	0	0	0	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Other infections specific to the	All	1.5	****	0	0	****	0	0	0	0	0	0
Perinatal period (P35.8-P35.9,P37.2-	White	0.0	0	0	0	0	0	0	0	0	0	0
P37.9,P38-P39)	Black	3.5	****	0	0	****	0	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetal hemorrhage (P50-P54)	All	4.4	****	0	0	0	****	****	0	0	0	****
	White	7.9	****	0	0	0	****	****	0	0	0	****
	Black	0.0	0	0	0	0	0	0	0	0	0	0
	Other	0.0	0	0	0 ****	0 ****	0 ****	0	0 ****	0	0	0
Transitory endocrine and metabolic	All	8.8	6	0				0		0	0	0
disorders specific to fetus (P70-	White	0.0	0	0	0 ****	0 ****	0 ****	0	0 ****	0	0	0
P74)	Black	21.2	6 0	0				0		0	0	0
Conductors of infant of a dishatia	Other	0.0	6	0	0 ****	0 ****	****	0	****	0	0	0
Syndrome of infant of a diabetic mother and neonatal diabetes	All White	8.8 0.0	0	0	0	0	0	0	0	0	0	0
mellitus (P70.0-P70.2)	Black	21.2	6	0	****	****	****	0	****	0	0	0
memas (1 70.0-1 70.2)	Other	0.0	0	0	0	0	0	0	0	0	0	0
Other conditions originating in the	All	193.1	131	****	31	44	26	14	9	****	0	****
perinatal period (P80-P96)	White	158.1	60	0	9	22	14	5	7	****	0	****
permatar period (1 00 1 00)	Black	243.5	69	****	21	22	12	9	****	****	0	0
	Other	128.0	****	0	****	0	0	0	0	0	0	****
Hydrops fetalis not due to	All	5.9	****	0	****	****	0	0	0	****	0	0
hemolytic disease (P83.2)	White	7.9	****	0	0	****	0	0	0	****	0	0
, ,	Black	3.5	****	0	****	0	0	0	0	0	0	0
	Other	0.0	0	0	0	0	0	0	0	0	0	0
Fetal death of unspecified cause	All	187.2	127	****	30	42	26	14	9	****	0	****
(P95)	White	150.2	57	0	9	20	14	5	7	****	0	****
	Black	240.0	68	****	20	22	12	9	****	****	0	0
	Other	128.0	****	0	****	0	0	0	0	0	0	****
Congenital malformations,	All	70.8	48	0	****	14	10	8	****	5	****	****
deformations and chromosomal	White	84.3	32	0	****	8	7	6	****	****	0	****
abnormalities (Q00-Q99)	Black	52.9	15	0	****	6	****	****	****	****	****	0
	Other	64.0	****	0	0	0	0	0	****	0	0	0

				Maternal Age									
Cause of Death ICD010 Code	Race	Ratio+	All	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Unk.	
Congenital malformations of nervous system (Q00-Q07)	All	11.8	8	0	0	****	****	0	****	0	0	0	
	White	10.5	****	0	0	****	****	0	0	0 0	0	0	
	Black Other	14.1 0.0	0	0	0	0	0	0	0	0	0	0	
Anencephaly and similar	All	8.8	6	0	0	****	****	0	****	0	0	0	
Malformations (Q00) Congenital hydrocephalus (Q03)	White	10.5	****	0	0	****	****	0	****	0	0	0	
	Black	7.1	****	0	0	****	0	0	0	0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
	All	2.9	****	0	0	0	****	0	0	0	0	0	
	White Black	0.0 7.1	0 ****	0	0	0	0 ****	0	0	0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Congenital malformations of heart	All	10.3	7	0	****	****	***	0	0	****	0	****	
(Q20-Q24)	White	10.5	****	0	0	****	****	0	0	0	0	****	
	Black	10.6	****	0	****	****	0	0	0	****	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Other congenital malformations of Circulatory system (Q25-Q28)	All	1.5	****	0	0	0	0	****	0	0	0	0	
	White Black	2.6 0.0	0	0	0	0	0	0	0	0 0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Congenital malformations of urinary system (Q60-Q64)	All	2.9	****	0	0	****	****	0	0	0	0	0	
	White	5.3	****	0	0	****	****	0	0	0	0	0	
	Black	0.0	0	0	0	0	0	0	0	0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Renal agenesis and other reduction defects of kidney (Q60)	All	1.5	****	0	0	****	0	0	0	0	0	0	
	White Black	2.6 0.0	0	0	0 0	0	0	0	0	0 0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Other congenital malformations of urinary system (Q62-Q64)	All	1.5	****	0	0	0	****	0	0	0	0	0	
	White	2.6	****	0	0	0	****	0	0	0	0	0	
	Black	0.0	0	0	0	0	0	0	0	0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Congenital malformations and	All	2.9	****	0	****	0	****	0	0	0	0	0	
deformations of musculoskeletal system, limbs and integument (Q65-	White Black	5.3 0.0	0	0	0	0	0	0	0	0	0	0	
Q85)	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Other congenital malformations (Q86-Q89)	All	8.8	6	0	****	****	****	****	0	0	0	0	
	White	10.5	****	0	****	****	0	****	0	0	0	0	
	Black	7.1	****	0	0	0	****	****	0	0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Multiple congenital malformations, not elsewhere classified (Q89.7)	All	5.9	****	0	****	0	0	****	0	0	0	0	
	White Black	7.9 3.5	****	0	0	0	0	****	0	0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
All other congenital malformations	All	2.9	****	0	0	****	****	0	0	0	0	0	
(Q86-Q87,Q89.0-Q89.3,Q89.8-Q89.9)	White	2.6	****	0	0	****	0	0	0	0	0	0	
	Black	3.5	****	0	0	0	****	0	0	0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Chromosomal abnormalities, not	All	32.4	22	0	0	7 ****	****	****	****	****	****	****	
elsewhere classified (Q90-Q99)	White Black	39.5 21.2	15 6	0	0	****	0	****	****	0	0	0	
	Other	64.0	****	0	0	0	0	0	****	0	0	0	
Down's syndrome (Q90)	All	4.4	****	0	0	****	0	0	****	****	0	0	
	White	7.9	****	0	0	***	0	0	****	****	0	0	
	Black	0.0	0	0	0	0	0	0	0	0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Edward's syndrome (Q91.0-Q91.3)	All	10.3	7	0	0	****	0	****	****	****	0	0	
	White	15.8	6 ****	0	0	****	0	****	0 ****	****	0	0	
	Black Other	3.5 0.0	0	0	0 0	0	0	0	0	0	0	0	
	OUICI	0.0	U	U	U	U	U	U	U	U	U		

Cause of Death ICD010 Code				Maternal Age									
	Race	Ratio+	All	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Unk.	
Patau's syndrome (Q91.4-Q91.7)	All	5.9	****	0	0	****	****	****	0	0	0	0	
	White	5.3	****	0	0	0	****	0	0	0	0	0	
	Black	7.1	****	0	0	****	0	****	0	0	0	0	
	Other	0.0	0	0	0	0	0	0	0	0	0	0	
Other chromosomal abnormalities,	All	11.8	8	0	0	****	0	****	****	0	****	****	
not elsewhere classified (Q92-Q99)	White	10.5	****	0	0	****	0	****	0	0	0	****	
	Black	10.6	****	0	0	****	0	0	0	0	****	0	
	Other	64.0	****	0	0	0	0	0	****	0	0	0	

Note: Not all selected causes of death are listed in Table F10 as some of them did not contain any counts. For the full list of selected causes for Table F10 please refer to the "Technical Notes Section".

⁺Ratio per 100,000 live births

**** In cell indicates count greater than 0 and less than 5

¹ National Center for Health Statistics, Model State Vital Statistics Act and Regulations (1992 Revision):8.

² National Center for Health Statistics, "State definitions and reporting requirements for live births, fetal deaths and induced terminations of pregnancy" (1997 Revision):28.

³ National Center for Health Statistics, "Instruction Manual Part 12" (1993):33-35.